

INTRODUCTORY LECTURE

TO THE COURSE UPON

PHYSIOLOGY AND PATHOLOGY,

IN THE

HAHNEMANN MEDICAL COLLEGE.



BY R. LUDLAM, M. D.,  
PROFESSOR OF PHYSIOLOGY AND PATHOLOGY.

Delivered October 16, 1860.

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CHICAGO:  
HALEY & KING, 168 CLARK STREET.  
1860.

## CORRESPONDENCE.

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CHICAGO, Oct. 20th, 1860.

PROFESSOR LUDLAM:

*Dear Sir:* The Class of the Hahnemann Medical College, through the undersigned, their Committee, respectfully request for publication a copy of your Introductory Lecture, delivered on Tuesday evening, Oct. 16th, 1860.

Permit us to express for ourselves the hope that you will accede to their request.

Very respectfully,

F. W. GORDON,  
E. A. BALLARD,  
L. D. HEMINWAY,  
L. F. SMITH,

Committee.

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No. 66 ADAMS ST., CHICAGO, }  
Oct. 22, 1860. }

GENTLEMEN:

It gives me pleasure to comply with the request of the Class in relation to the publication of the inclosed Introductory Lecture.

Please present, as their Committee, my grateful acknowledgements to the Class, with the assurance that my earnest desire is to render my instruction both profitable and acceptable to you all.

Your friend,

R. LUDLAM.

TO MESSRS. GORDON, BALLARD, HEMINWAY, and SMITH,

Committee of the Medical Class, Hahnemann Medical College.

## INTRODUCTORY LECTURE.

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GENTLEMEN MEDICAL STUDENTS:

I salute you and welcome you to this new seat of Medical Science and Instruction.

In the inauguration of an enterprise which, for so long a time, has lain so near our hearts, it is most gratifying that you are present in such numbers to-night. Your countenance is at once a *sine qua non*, and a security of success. The profession which you have adopted, and are yet to adorn, congratulates itself upon the establishment of the amicable and hopeful relations now for the first time forming.

Gentlemen, I am proud to address you on this occasion. I welcome you in the ardent hope that our mutual facilities, and mutual forbearances also, may not fail to develop those hidden powers of acquirement which I am confident dwell within you.

You are here with laudable motives. Your feet are fast upon the threshold of the Temple of Knowledge. You would that, as guides through the halls of that temple, and to its treasures, the Faculty of the HAHNEMANN MEDICAL COLLEGE should acquaint you beforehand with the routes to be taken, and the rewards of exploration which are in prospect.

The present hour dates the delivery of the first Lecture of the first Course upon Physiology and Pathology in this Institution. This preliminary Lecture is but the preface to the volume, and for whatever imperfections you may discover therein, I must implore your charity. This is the first edition of the work, and were it quite perfect, the expressive and

familiar vernacular of the book-maker, "Revised and improved," need never qualify a subsequent issue.

We have a laborious undertaking before us, and I ask of you the most hearty co-operation. We are all ambitions; some for one reason and some for another. The main-spring of this movement, to organize a College and to collect and educate men-healers and men-savers, has been, we trust, the noble desire to do good, and to be useful in our day and generation.

It is related that Charles VI, of France, ordained that "none should presume to entertain company with more than two dishes and a mess of soup." The Board of Trustees of this Institution have passed a similar edict, and I, too, am limited to serve you with but two dishes, and mayhap a little broth. However grateful it might be to draw aside from the details of the more *exact* departments of our science, in order to discuss the polemics of Medicine; and whatever the temptation, in this peculiar age, to devote one's time to

"prove his doctrine orthodox  
By Apostolic blows and knocks,"

we must forego all such minor entertainment for something more substantial.

There is theme enough, or, to pursue the figure, there is sufficient aliment in the two dishes aforesaid. A knowledge of Physiology and Pathology is of paramount importance to the physician. We could as readily conceive a competent clergyman whose course of reading and study should have failed to beget in him a familiarity with the text and teachings of the inspired volume; or of the learned jurist, whose library should have failed to afford its possessor other instruction in his profession than could be gleaned from a single work entitled "Every man his own Lawyer;" as of the competent, the learned, and the trustworthy physician who knew nothing of either of the branches of study before us.

It has been ordained of Providence that every living thing must die. With the threads of our very existence there are interwoven causes which beget in us suffering and sorrow,

disease and decline. Pain is the price of pleasure; and life has its counterpart in death. And thus, while day and night, summer and winter, seed-time and harvest, heat and cold, light and darkness follow each other, shall we find health and sickness, life and death, the common and universal inheritance both of the animal and of the vegetable creation.

But despite this truth, it cannot be doubted that, through a want of conformity to the dictates of reason and propriety, mankind have entailed upon themselves an immense amount of suffering and inconvenience which might have been averted.

These errors it is the province of the physician to shun. A knowledge of the human organism, in its healthy and diseased states, and in all its relations, dietetic and doctrinal, calamitous and curative, to the outer world, covers an immense field, and involves an extraordinary amount of research.

Here, then, is your sphere of study. Not, indeed, with a view to thwart Providence; nor yet with a vain boasting that to add years to a neighbor's life were as easy as to speak the word; but designing to prevent a premature sorrow; to assuage the keenness of one's anguish; to harmonize the outer circumstances of life with its inner conditions; and so to diminish the number of diseases, as possibly to increase the longevity of the race.

To build a ship requires a variety of material. The slender ties are as requisite as the great timbers; the screws as the sails; the hawser is as necessary as the hull. The origin and properties of every contribution to the floating palace is a subject for close and careful study. Inasmuch, therefore, as man, the head and front of God's creation, is superior to the work of his own hands; as his physical barque is more preciously freighted than is any other—from the gondola to the Great Eastern—so is it requisite that we subject its every part to the most careful analysis, and learn, if we may, its conditions in health and in disease.

In the pursuit of this study, there are difficulties and obstacles to be encountered which may, at first sight, appear almost

insurmountable. But you will soon learn that the progress of science is from the compound to the simple; and of mankind, "from the pyramid toward the cottage." In our day the chemical and physiological phenomena which so perplexed the ancients in their attempts at analysis, are reduced to their simple elements, and their *rationale* is brought down to the comprehension of the school-boy in all our academies. Science is hourly penetrating those mysteries which, for so long a time, men have failed to fathom.

Let us inquire whether we are sufficiently inspired with a love of science to enable us to overcome the obstacles to an accurate perception of the animal and organic laws of life and health.

What a beautiful theme is this of MAN; in the aggregate, and in the individual! Think of him as representing an organism which is presided over by a superior and subtle something we style mind. What a wonderful organ is the brain, the seat of that mind! The common receptacle of impressions from without; the home of the will and the perceptive faculties, with all the numerous characteristics of the intelligent man, and which serve to distinguish him from every other species of animal.

Its ganglionic centres receive and originate nervous impressions. The special senses, which so much delight us at every turn, are dependent upon direct communication therewith. Mental associations, memory, and all the various peculiar functions of the rational being have their seat and centre in the great *sensorium*.

Here, too, abide those creative faculties which have worked such wonders in the world around us. The marvels of mechanism, the mansions of the wealthy, the workshops and homes of a busy and a happy people, the facilities of commercial transport and of domestic enjoyment which so abound, are, as photographers say, but "copies" from a negative picture, first drawn on the brain of the artist, the architect, the engineer, and their fellows. The books we read, the songs we love, are mere transcripts only. The thought that flashes

around the world must have been charged with life by its originator ere it could cause the heart of the million to throb with joy, or pulsate with sorrow.

These, with the capacity for obtaining knowledge, as well as of reason and intelligence, are but a few of the varied and wonderful powers of that wonderful instrument, the human brain. They represent its healthy condition, with a glimpse at its physiological workings.

In disease also, or pathologically speaking, its manifestations border on the marvellous. What is so beautiful intact, is by no means devoid of interest when touched by the finger of pain and disorder. If the sensorium be organically ill, all the functions which are in sympathy with it must suffer—the tenant with the tenement. Wrong impressions of exterior life are telegraphed to headquarters, and the perceptive faculties are deceived. Hence delirium and madness. Friends appear as foes; and aberrations of the intellect and will are begotten in the unfortunate patient, which it may be quite impossible to overcome or supersede. Thousands who style themselves healthy are the victims of those morbid sensations which make invalids of their neighbors.

The special senses, keen and comforting as they are to us, are alike vulnerable to the assaults of disease. The eye, the ear, the tongue, the touch, may become morbid, so that light and sound, and taste and contact, shall induce pain instead of pleasure, the most excruciating in lieu of the most exquisite sensations.

Or, if we turn our attention from the head to the heart, what lessons of wisdom may we not learn. From thence proceed the issues of life. From the first faint cry of the newly-born babe, to the last gasp of mortality, it keeps the ceaseless current of the blood in motion. While we sleep, and when we awake, by day and night, ever and alway, it beats on and on, and, whether we will or no, the red tide flows in its channels charged with the very life that is so dear to us. The heart, the arteries, the capillaries and the veins,



are the conduits for products which have been elaborated by particular organs for the nourishment of the individual textures, as well as for those substances which, being already effete, are to be eliminated and expelled.

Think of the blood-cell; a complete organism in itself; of its varied and wonderful functions. The messenger of aliment and of oxygen, of life and of breath to the tissues: the noiseless courser upon whose short career depends the sustenance and growth of our greater bodies. Think of its mission, and reflect that for every beat of the pulse, nearly twenty millions of these organisms die!

Is it a marvel if the adjustment of such a beautiful mechanism, or the molecular forces of these little microcosms, are subject to derangement and decay!

Respiration is another of the vital functions. One of the essential conditions both of animal and vegetable life, is the due supply of atmospheric air. The anatomical structure of the lungs exhibits a wise adaptation of the means to the end. Two objects are to be performed by the process of respiration. These are, to introduce oxygen into, and to provide means for the excretion of carbonic acid from the system. The spongy texture of the lungs will allow only gaseous, and never either solid or liquid elements to pass through it as a respiratory medium.

To its sensitive and delicate surfaces, the blood of the body is brought some seventeen times in the minute, on the average, during the whole of our lives. It is estimated that about seventeen cubic inches of air are introduced into the lungs by each inspiration. Oxygen, being the chief element of the atmosphere, is thus brought into direct contact with the blood, through the respiratory surfaces of the spongy cells; while by expiration, the carbonic acid, the effects of which, if retained in the system, would be most pernicious, is happily set free.

The influence of muscular contraction in aid of this function is remarkable. By the peculiar action of the diaphragm the air is drawn, not forced, into the respiratory apparatus.



The mechanism is of the simplest and least complex order. Its *modus operandi* resembles that which takes place in a common bellows when, by depressing the lower board, the air is drawn and not forced into the instrument through the pipe.

The expansion of the chest is a muscular act. Its moderate contraction, also, is altogether dependent on the physical properties of its walls. The chest expands, and with it the lung; or it contracts, and the lung is compressed.

To comprehend the minutiae of this process alone, involves a vast amount of study and of patient research. If to this we add a knowledge of all those agencies by which so vital a function may be perverted, or, if disordered, restored again to its normal physiological standard, it will not be claimed that in the labor you have undertaken to accomplish, there is any considerable margin for leisure.

Gentlemen, I desire, if possible, to engraft upon your minds the conviction that this is no holiday excursion upon which you have embarked. The legacy left to the profession by the thousands who have preceded you is one of labor and responsibility.

In medical, as in other matters, there is a wide difference between accomplishment and qualification. A physician may be very accomplished without being qualified for his peculiar function in life and in society. There are many who begin, and who pursue the practice of medicine, much as Dick Tinto, in *Scott's Bride of Lammermoor*, began painting before he had any knowledge of drawing. Accomplishment pertains to the poetry, the Science of Medicine. Qualification to its practicality and availability as an Art. In exercise, this latter will never lead you astray, for it is like the carrier pigeon's pilot-sense which always guides its possessor aright. It is the almost sole condition of success and of usefulness in life. I cannot well understand how it is possible for one to fail with it, as thousands have done without it.

But I should greatly regret to be understood as representing it best that you ignore every species of collateral inform-

ation and accomplishment in the profession which you have chosen. On the contrary, I recommend you to bring all the treasures, of things both new and old, into the storehouse. There is no danger of your learning too much. To bring the Sciences related to Medicine to their present imperfect state of development, has been the work of centuries. And the most pains-taking and really laborious among her scholars, are they who have contributed most largely to this laudable and beneficent labor. You should emulate their example. There is no profession or pursuit in life which demands a greater extent or variety of knowledge than ours. And among them all, there are none which have contributed more largely to the building up and development of every branch of human information than has our own.

What we would discourage is the hope, sometimes entertained by our young men, to be able at once to pursue a legitimate calling in its every-day practical details, and at the same time to seek for and secure eminence in other inviting fields which stretch away toward the horizon. It is folly to attempt the serving of two masters. No Grecian or other sage, ever laid down a more expressive precept than that which applies pre-eminently to the physician—"Know thyself." And he whose thoughts are emphatically itinerant, never at home, has no business amongst us. As a means to perfection in Medicine, as in morals, God will be inquired of by his children.

There is yet another motive to a careful and thorough acquaintance with your profession, which should influence you to good works. It is that, in whatever orbit a man moves, and whether he will or no, he carries others with him. His thorough qualification on the one hand, or his incompetency on the other, are certain to have an influence, for good or for evil upon those around him.

The biographer of a once celebrated surgeon informs us that, when Mr. Pott was seized with his last illness, he said: "My lamp is nearly extinguished; I hope that it has burned for the benefit of others." The sweet savor of a life well

spent was his. What a satisfaction, at the close of such a career, to review the good which one has been enabled, as an instrument of Providence, to accomplish for his kind. I had rather have the grateful tear-drop that tells the story of my having saved the life or limb of a fellow mortal, than all the gold of Ophir. There is no monument to compare with it. The prattle of the children, whose play is hushed, and the prayers and sighs of the aged over the expiring or departed physician, are a sweeter, sadder requiem than almost any other.

But the rewards of such a life-long endeavor may prove a source of comfort and happiness to us while yet in this world. If one succeeds in his profession, it must be as a secondary matter, and because he has been a blessing to his neighbors, and so bound up their welfare with his own as to contribute to their mutual advantage. We grow as we give; we learn as we teach. This is the law of our development—the test and metre of our activity and usefulness.

Now the question occurs to us, how shall a man give if he have neither the motive nor the means wherewith to contribute to another's welfare? To make our profession eminently useful, its membership must be eminently qualified for the fullest and freest performance of its varied offices of trust and responsibility. It is impossible, in the very nature of things, that a bold and reckless spirit, united with an ignorance of the laws of health and of disease, and of the various structures and systems of the human fabric, should entitle a man to the honorable name of Physician. It is a misnomer to style such an one a Physician. "Nothing from nothing and nothing remains." No man can be the distributor of that which is the fruit of the most diligent study, unless his mind be stored with the force, the food, and the faculty of reflection. The tinker's thoughts are not those of the philosopher.

In the growth of morphological forms something more is requisite than a mere supply of plastic material. The little germ that links one generation with another must be charged with an innate, intangible, organic force, in order that it may mould and assimilate this material to the structural de-

velopment of the individual it represents. So is it with the fruit of the mind. The aliment and elements for great thoughts and achievements in the Science and Art of Medicine, lie scattered all around us. But whence is to come that plastic force of modality which is to develop its complete and more complex organization?

Gentlemen, this force lies latent in your minds, and as you pursue your studies, it will surely be brought into play. Thought—close, careful, and abstract, will strike the fire from facts, and the spark preserved shall serve to illumine your pathway through a long and useful life. Let me, therefore, exhort you to diligence. There could be no more mortifying reflection upon this Institution, and all concerned, than to have it said of the fire that burns in you, that it is feeble and flickering, and ever faint and expiring. Remember, I pray you, that the “students” of the present are to represent the *status* of Medicine in the future.

Within the memory of all before me, the times have undergone a wonderful change. Once the physician’s parchment was a sufficient passport to almost any position in society. A man was honored and elevated by membership in what was deemed a most honorable profession. But now the reverse of this is almost true. The cloth has ceased to confer a coveted distinction. The rule at present would appear to be that the physician must dignify and ennoble his calling, if he would win either position or success.

In every community, Medicine assumes a position and influence proportioned to the individual breadth and compass of its representatives. If that position and influence be poor and degraded, it must be the fault of those whose bearing should have been at once noble and aspiring, and marked by a consciousness of dignity in themselves and their calling.

I have personal knowledge of a parent whose maxim, in rearing his sons, was this: “If you wish your boy to be a man, *treat him as a man.*” And this involves the principle that I would apply to the culture and development of the Healing Art, and especially to the Homœopathic department of the same.

We shall never succeed in inspiring the proper trust and confidence in our system *until it is manifest that we respect it ourselves!* That foreign ambassador who should desire to excite admiration and respect for the government he represents, would succeed but poorly, were he to fail in arousing a proper respect for himself. Society adjusts its horoscope for Homœopathy by the fixed planets which shed a clear or a cloudy light around them.

And here I would remark, regarding the plan which it has seemed proper to pursue in my Lectures upon Physiology and Pathology, during the Course to which this is initiatory, that the field to be cultivated is so extensive, and our time so limited, that there will necessarily remain but the least margin for any species of doctrinal discussion. For an illustration and enforcement of the peculiar tenets of Homœopathy, you will therefore look to the proper Chairs—those of the Institutes and of Materia Medica. My hour must be devoted to the consideration of branches which are the same in both Schools of Medicine, and which, being practical in their nature, must be studied with a calm and dispassionate spirit. Our motto will rather agree with the sentiment of Richter, that, “Though wings are admirable for the azure, we want boots for paving-stones.” The theme upon which it is my duty to discourse to you, and which I am expected to dilate upon during the Lecture-term, is a right noble, because it is an eminently practical one. There is, however, much that is poetical and enticing connected with Physiology, and which frequently tends to lead both teacher and pupil astray. We shall be obliged to look to our soundings, and, trusting the defence of our peculiar doctrines to the brethren aforesaid, remember that, while

“——— larger boats may venture more,  
The lesser ones should keep near shore.”

The truth is that, having attained a deserved rank among the sciences designed to benefit the race, Homœopathy has little need, in most civilized communities at least, of the battling and warfare that once seemed essential to secure for it a



foothold. As, in our day, the Christian religion is promulgated more generally and successfully without than with the rough and stern spirit so necessary to the Reformer of Luther's period; so each and both these benefactions of a kind Providence are allowed to spread and bless mankind more in peace than in war. Both may substitute the progressive for the defensive. If Homœopathy contains errors, let them be rectified; if truth, let it be verified. We can be rivals, surely, without wrangling; earnest, without being enemies; and adversaries, if you please, without being detractors.

There is a type of mind approaching that which in certain animals is termed instinct. Now this mind, being incapable of improvement, after it has attained a certain point of culture, can never go beyond it. As the spider weaves her meshy web after the identical fashion introduced by the Eve of her species; so there are professional characters who prefer to follow close in the steps of Hippocrates, or Galen, or others of the old worthies whose maps and charts of Medicine will answer for them. Their ideas and minds being entirely of this order, it were futile to attempt to remedy or to renovate them. If we shall waste our breath in this direction, it is so much of time and labor lost to the development of our special philosophy, and of the details of our sanative art. We can be better employed.

These bodies seem to be endowed with a *vis inertię*, and are only qualified to continue in one condition without change. They represent the fossil remains of Medicine, being, literally, "chips from the old block." A whole cabinet of such specimens would scarce be worth a copper, and why should we strive to collect or to conquer them? In this connection, one is frequently tempted to a satirical version of a most beautiful piece of imagery from Coleridge's *Ancient Mariner*:

"Day after day, day after day,  
We stuck, nor breath nor motion;  
As idle as a painted ship  
Upon a painted ocean."

No, gentlemen, let us rather look upward, and strive to cultivate an association and acquaintance with somewhat more

lofty and ennobling. Mind is of more import than matter; and the command, "Go, heal the sick," as imperative as any beside. The dead tree may do service as timber, but its sapless boughs can never more shed a balm for the healing of the nations.

You are henceforth to become laborers in the field of science. True, your apprenticeship has but just commenced, but your interests are already identified with the weal and welfare of your future calling. You cannot escape its responsibilities. Already, methinks, I can discern the cloud in the horizon of your hopes, which, although no larger than a man's hand, is yet to shed its shower of blessings on your kind.

Your books are rather the mile-stones along the route, than the means of your transit. Reading will do much, but observation more, to qualify you for your sphere of duty. And this sphere you should strive to fill to the best of your individual ability. The measure of knowledge that sufficed for the magi, the medicine man, and the enchanter of the olden time, will not answer for the age upon which we are fallen.

A strong incentive to diligence in your studies will be found to originate in the impression that has gone abroad that we are of a class who discard the collateral branches, and deny their value *in toto*. This sentiment it is for you to disprove. By the extent of your familiarity with the teachings of anatomy, physiology, and pathology, you are to illustrate the fact to those who would subsidize them, that these are equally important to one School of Medicine as to the other. Any branch of study whatever, is noble in proportion to the breadth, the depth, and the diversity of the knowledge upon which it is founded. The measure of your information in all these important particulars, and with those who know you best, will be the criterion of your ability and usefulness.



Finally, Gentlemen, do not be discouraged in the outset. There is much to learn, but you are competent for the task. The dark mists and clouds of uncertainty shall be dispersed, as one by one the mysteries of that microcosm over which you are to preside, and the key to the sanctuary of its health, shall be entrusted to your safe keeping.

Keep a good heart, therefore. "Learn to labor, and to wait." Do not be too eager for the first fruits of knowledge; for position, power, influence, and personal gain, will come to reward you by-and-by.

"Bide your time! one false step taken,  
Perils all you yet have done:  
Undismayed—erect—unshaken—  
Watch and wait, and all is won.  
'Tis not by one rash endeavor,  
Men or States to greatness climb—  
Would you win your rights forever,  
Calm and thoughtful, bide your time!"